

SHIP SYSTEM Hull Structural Bulkheads	SUBSYSTEM Tanks	MRC CODE	
SYSTEM Tanks and Voids	EQUIPMENT	RATES GS-11/12	M/H
MAINTENANCE REQUIREMENT DESCRIPTION 1. Conduct SEMAT Assessment procedure for Tanks and Voids.		TOTAL M/H ELAPSED TIME	
SAFETY PRECAUTIONS 1. Forces afloat comply with NAVOSH Program Manual for Forces Afloat, OPNAVINST 5100.19 series. 2. Ensure all tag-out procedures are in accordance with current ship/shore instructions. 3. All tanks and voids must be certified gas-free prior to entering.			
TOOLS, PARTS, MATERIALS, TEST EQUIPMENT MATERIALS 1. [1102] Rags, wiping TOOLS 1. [2271] Flashlight, Type 3, style 1, explosive proof 2. Rule, folding, 6' NSN 5210-00-293-3511 3. [0721] Knife, pocket, Electricians 4. Small magnet 5. [1350] Tape, measuring, 3/8" steel, 100 FT, hand crank 2. Coating Condition Reference Standards 3. T-bar Coating Condition Reference Standards 4. Preservation/Protocols for COMNAVSURFLANT Tanks and Voids 5. [09814] Digital camera photo disks 6. [2917] Camera (all types/models), No NSN -- W/C provide digital camera MISCELLANEOUS 1. Tank and Void Inspection Form NOTE: Numbers in brackets can be referenced to Standard PMS Materials Identification Guide (SPMIG) for stock number identification.			
DISTRIBUTION STATEMENT D Distribution authorized to DOD components and DOD contractors only; critical technology; August 1999. Other requests for this document shall be referred to Naval Sea Systems Command (SEA 04TD). Destroy by any method that will prevent disclosure of contents or reconstruction of the document.		89	AAAA
LOCATION	DATE August 1999	N	

PROCEDURE

NOTE 1: Accomplish assessment during availability.

NOTE 2: All preliminaries must be accomplished by S/F, contractor, etc prior to SEMAT assessment.

NOTE 3: Closed, non-ventilated spaces can be very dangerous. Personnel entering tanks and voids must be trained in appropriate safety procedures.

Preliminary

- a. Ensure tank or void has been certified gas-free and safe for human entry.
- b. Review JSNs from the ship's CSMP for discrepancies to be assessed under this procedure.
- c. Review SNAPSHOTS Database for previous inspection results.
- d. Review CNSL Departure from Specs data.
- e. Review 3-M history for previous maintenance actions.
- f. Give the Commanding Officer a brief presentation explaining SEMAT and what you intend to accomplish.

1. Conduct Target Assessment Procedure for Tanks and Voids.

The Tank and Void Inspection Form is divided into twelve discrete areas. They are: General Data, Access Data, Ladder Data, Vent/Overflow Data, Tank Level Indicator (TLI) Data, Sounding Tube Data, Cathodic Protection Data, Coating Data, Structural Integrity Data, Seachest Data, Piping Data, and Tank Closeout. A block for Additional Comments is available for explanation of problems found.

- A. Enter the following information into the **General Data** section of the Tank and Void Inspection Form:

ADD - adds new record

UPDATE - updates existing record

DELETE - deletes record from database

HISTORY - stores record in history (indicating HISTORY will not change current tank status)

1. UIC - enter the ship's UIC

2. Ship's Class - enter the ship's class

3. Ship's Name - enter the ship's name

4. Hull - enter the ship's hull number

5. Tank - enter the compartment number (e.g. 4-127-10-V)

If unknown, read the number from the tank label plate. If there is no tank label plate, verify the tank number from damage control drawings.

6. Service - enter the description indicating the use or service of the tank being assessed.

7. SWLIN - enter the Ship Work Line Item Number (SWLIN), a 5 digit number used for designating maintenance and repair boundaries.

8. Area - Enter the surface area of the tank or void being assessed in square feet.

NOTE 4: Tank area = Total containment area + surface area of all internal supporting structure, piping etc.

PAGE 2 OF 12

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PROCEDURE (Cont'd)

A. Enter the following information into the **General Data** section of the Tank and Void Inspection Form: (cont'd)

9. Gallons - enter gallons as verified by Ship's Force (corrected for 100%)
10. Solid Ballast - enter as:
YES, NO, UNKN
11. WC - enter Work Center responsible for the tank
12. Access - enter compartment, tank or void number(s) that must be accessed in order to get into the tank or void that is being assessed.
13. APL -enter APL
14. RIN - enter RIN
15. Key Code - enter Key Code (1 = visual in-tank inspection, 2 = on-board data collection, 3 = non-validated data)
16. Source - enter source (i.e. dc plates, oil king, ship's plan, POSSEE, Tank & Void Inspection)
17. Date - enter assessment date (All assessment dates should be the same for the overhaul period)
18. Inspection reason - enter the reason for the inspection (CMP, Emergent Repair, Other)
19. Inspector's Name - enter inspector's name and rank

NOTE 5: Assessor shall photograph one 'typical condition photo' for each tank or void for each area of the tank or void assessment identified with a discrepancy and for which an OPNAV 4790/2K or Material Assessment Form will be submitted.

B. Enter the following information into the **Access Data** section of the Tank and Void Inspection Form:

20. Tank Top Corrosion - check for excessive corrosion of the portion of the overflow piping where it exits the tank as well as the space(s) directly above the tank, enter as:
UNKN, SAT, UNSAT
21. Manhole cover, gasket and fasteners - check the physical condition of the access and associated hardware, enter as:
UNKN, SAT, UNSAT

PAGE 3 OF 12

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PROCEDURE (Contd)

C. Enter the following information into the **Ladder Data** section of the Tank and Void Inspection Form:

22. Fabricated Ladder Present - enter as:
YES, NO, UNKN
23. Fabricated Ladder Damaged - a fabricated type ladder is considered damaged if any of the brackets securing the ladder to the bulkhead or tank bottom are broken, or if there is severe corrosion or wear resulting in thinned, broken or missing rungs; enter as:
YES, NO, UNKN, N/A
24. Fabricated Ladder Material - enter as:
AL, CRES, STEEL, GS
25. Welded Rungs Present - enter as:
YES, NO, UNKN
26. Welded Rungs Damaged - welded rungs are considered damaged if attaching welds or rungs themselves are significantly thinned or missing, enter as:
YES, NO, UNKN, N/A
27. Hand/Foot Holes Present - enter as:
YES, NO, UNKN
28. Hand/Foot Holes Damaged - hand/foot holes are considered damaged if the metal is corroded to the point of being thinned to a 'knife edge' condition, enter as:
YES, NO, UNKN, N/A

D. Enter the following information into the **Vent/Overflow Data** section of the Tank and Void Inspection Form:

29. Vent/Overflow in tank - enter as:
YES, NO, UNKN
30. Check Valve Installed - On JP tanks, a "nest" of 5 tanks (typically) have 4 tanks overflow into one. This tank then overflows to the ship's exterior via an overflow box with a flapper valve. The overflow pipes are tied together in a common header that runs to the overflow tank. Each tank's overflow pipe is fitted with a check valve that prevents back flow of oil from another tank in an overflow condition. This check valve may or may not be in close proximity to the tank top. The valve should be found and verified that it is installed, enter as:
YES, NO, UNKN
31. Vent/Overflow Line CUNI 1/2 up - There should be a flange or bimetallic weld approximately mid-way between the third and fourth decks. If there is no flange or bimetallic weld, check the piping all the way up with a magnet. To reduce the effects of corrosion on vent/overflow piping, the piping should be constructed of a Copper/Nickel (CUNI) alloy at least half way up the piping system. CUNI piping has no magnetic properties and is highly resistive to corrosion. Enter as:
YES, NO, UNKN, N/A

PAGE 4 OF 12

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PROCEDURE (Contd)

E. Enter the following information into the **Tank Level Indicator (TLI) Data** section of the Tank and Void Inspection Form:

32. TLI present in tank - enter as:
YES, NO, UNKN
33. TLI damaged - enter as:
YES, NO, UNKN, N/A
34. TLI type - enter as:
GEM, KING, GAGE, TELEFLEX, METRITAPE, UNKN, N/A
35. Old Tank Top Penetration present - Previous TLIs required 2 tubes (usually 1/4 to 1/2 inch diameter) penetrating the top of the tank. When new TLIs were installed, these tubes were frequently cut off 3 to 6 inches above and below the tank top instead of being completely removed and the penetrations sealed. enter as:
YES, NO, UNKN
36. Old Tank Top Penetration Welded Closed - The tank top penetration(s) for an old, removed TLI should be sealed by welding the penetration closed. enter as:
YES, NO, UNKN, N/A
37. King Gage Tubing Removed/Plug Welded - All King gage TLI tubing should be removed and the tank top penetration plug welded. enter as:
YES, NO, UNKN, N/A

PAGE 5 OF 12

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PROCEDURE (Contd)

F. Enter the following information into the **Sounding Tube Data** section of the Tank and Void Inspection Form:

38. Sounding Tube Present in Tank - Some tanks require a non-electrical method for determining the level in the tank. These tanks would be equipped with a sounding tube, through which a measuring device (a tape with a weighted "BOB") may be lowered into the tank. enter as:
YES, NO, UNKN
39. Sounding Tube Damaged - Inspect the sounding tube for any indication of damage. Damage may be severe corrosion or physical damage to the sounding tube which could result in the impingement of the measuring device, rendering the resulting reading invalid.
Enter as: **YES, NO, UNKN, N/A**
40. Deck Fitting Damaged - Sounding tubes have deck fittings with removable covers to provide access to the tube as well as to prevent debris from entering the tube. Damage to the deck fitting may range from severe corrosion to mechanical damage to the securing threads. Enter as:
YES, NO, UNKN, N/A
41. Stuck "BOBS" - A "BOB" is a weight attached to the end of a sounding tape which allows the tape to reach the bottom of the sounding tube to obtain tank level readings. Sometimes the tape used to lower the "BOB" down the sounding tube will break and the "BOB" will drop to the bottom of the sounding tube and rest against the striker plate. Check the striker plate to see if a "stuck "BOB" is present. Enter as:
YES, NO, UNKN, N/A
42. Is Material CUNI - As with the vent/overflow piping, Copper/Nickel (CUNI) piping has been proven to be highly resistive to corrosion and is the material of choice for piping systems regularly exposed to corrosive liquids. This can be tested using a magnet. CUNI piping has no magnetic properties.
Enter as:
YES, NO, UNKN, N/A
43. Vent Holes Present - Sounding tubes require vent holes at regular intervals to permit liquid free flow which, in turn, will provide a more accurate reading of the tank level. Minimum requirement is for the top of the sounding tube to be vented with a 1/2 inch minimum diameter hole within the tank.
Enter as: **YES, NO, UNKN, N/A**

PAGE 6 OF 12

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PROCEDURE (Contd)

F. Enter the following information into the **Sounding Tube Data** section of the Tank and Void Inspection Form: (contd)

44. Striker Plate on Ship's Structure -
A striker plate is any device located at the bottom of a sounding tube so as to prevent the "BOB" from damaging tank plating or becoming jammed while still allowing free flow of the contained liquid. Typical installation is an integral "L" or "T" at the bottom of the tube or a metal plate welded to ship's structure directly beneath the end of the tube. Enter as:
YES, NO, UNKN, N/A
45. Striker Plate on Sounding Tube - Enter as:
YES, NO, UNKN, N/A
46. Striker Plate Damaged - A damaged striker plate can result in a stuck "BOB" and inhibit accurate tank level readings. Damage can range from severe corrosion to physical damage. Enter as:
YES, NO, UNKN, N/A
47. Take Down Joints Installed - The purpose of the take down joint is to allow easy replacement of striker plates and removal of "stuck bobs" without performing hot work in the tank. Enter as:
YES, NO, UNKN, N/A
48. CRES Label Plate Installed - Old label plates are carbon steel and typically corrode away and become unreadable. A Corrosion Resistant Steel (CRES) label plate identifying the tank should be installed at the sounding tube deck fitting. Enter as: **YES, NO, UNKN, N/A**

G. Enter the following information into the **Cathodic Protection Data** section of the Tank and Void Inspection Form:

49. Cathodic Protection in Tank - Cathodic protection is a passive electrochemical method employed to minimize surface corrosion. Passive cathodic protection is provided in tanks and voids exposed to sea water and in CHT tanks in the form of zinc anodes bolted to the sides or bottom of the tank or floodable void. These anodes prevent corrosion of the steel structure of the tank by sacrificially depleting in preference to the steel. Enter as:
YES, NO, UNKN
50. Bottom Quantity - Count the number of anodes fastened to the tank bottom and to the bulkheads to a level of 2 feet above the tank bottom. Enter quantity.
51. Sides Quantity - Count the number of anodes fastened to the tank sidewalls above a level of 2 feet above the tank bottom. Enter quantity.

PAGE 7 OF 12

AAAA

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PROCEDURE (Cont'd)

G. Enter the following information into the **Cathodic Protection Data** section of the Tank and Void Inspection Form: (cont'd)

52. Bottom Depletion Percentage - Enter as:
GT 50%, LT 50 %, UNKN, N/A
 (GT = greater than, LT = less than)
53. Sides Depletion Percentage - Enter as:
GT 50%, LT 50 %, UNKN, N/A

H. Enter the following information into the **Coating Data** section of the Tank and Void Inspection Form:

54. Tank Painted - Enter as:
YES, NO, UNKN
55. Date Tank Painted - Enter date tank painted.
56. Surface Preparation Method - Enter as:
Hand Tool Clean (SP2), Pwr Tool Clean (SP3),
Abrasive Blast to Near White (SP10),
Power Tool Clean to Bare Metal (SP11), UNKN, N/A
57. Painting Method - Enter as:
100% Recoat, Touch-up & Overall coat, Spot Touch-up only,
UNKN
58. Paint System 1st Coat - Enter paint system 1st coat
59. Paint System 2nd Coat - Enter paint system 2nd coat
60. Paint System 3rd Coat - Enter paint system 3rd coat
61. Paint System 4th Coat - Enter paint system 4th coat
62. Total Square Feet of Tank Preservation in Condition 1 -
 Enter total square feet of tank preservation in condition 1
63. Total Square Feet of Tank Preservation in Condition 2 -
 Enter total square feet of tank preservation in condition 2
64. Total Square Feet of Tank Preservation in Condition 3 -
 Enter total square feet of tank preservation in condition 3
65. Total Square Feet of Tank Preservation in Condition 4 -
 Enter total square feet of tank preservation in condition 4
66. Paint Condition Top - Enter as:
0 = UNKN, 1 = GOOD, 2 = FAIR, 3 = POOR,
4 = BAD, 10 = N/A
67. Blistering Size Top - Enter as:
0 = UNKN, 2, 4, 6, 8, 10 = NO BLISTERS, N/A
68. Blistering Density Top - Enter as:
U = UNKN, F = FEW, M = MED, MD = MEDDENSE,
D = DENSE, N/A
69. Paint Condition Sides - Enter as:
0 = UNKN, 1 = GOOD, 2 = FAIR, 3 = POOR,
4 = BAD, 10 = N/A
70. Blistering Size Sides - Enter as:
0 = UNKN, 2, 4, 6, 8, 10 = NO BLISTERS, N/A
71. Blistering Density Sides - Enter as:
U = UNKN, F = FEW, M = MED, MD = MEDDENSE,
D = DENSE, N/A
72. Paint Condition T-Bars - Enter as:
0 = UNKN, 1 = GOOD, 2 = FAIR, 3 = POOR,
4 = BAD, 10 = N/A

PAGE 8 OF 12

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PROCEDURE (Cont'd)

H. Enter the following information into the **Coating Data** section of the Tank and Void Inspection Form: (cont'd)

73. Blistering Size T-Bars - Enter as:
0 = UNKN, 2, 4, 6, 8, 10 = NO BLISTERS, N/A
74. Blistering Density T-Bars - Enter as:
U = UNKN, F = FEW, M = MED, MD = MEDDENSE,
D = DENSE, N/A
75. Paint Condition Bottom - Enter as:
0 = UNKN, 1 = GOOD, 2 = FAIR, 3 = POOR,
4 = BAD, 10 = N/A
76. Blistering Size Bottom - Enter as:
0 = UNKN, 2, 4, 6, 8, 10 = NO BLISTERS, N/A
77. Blistering Density Bottom - Enter as:
U = UNKN, F = FEW, M = MED, MD = MEDDENSE,
D = DENSE, N/A

I. Enter the following information into the **Structural Integrity Data** section of the Tank and Void Inspection Form:

78. Structural Integrity Compromised by Corrosion -
Indicate whether or not the structural integrity
of the tank was compromised by corrosion
(i.e., rust holes).
Enter as: YES, NO, UNKN
79. Structural Integrity Requires Repair - Enter as:
YES, NO, UNKN

NOTE 6: A compromise of the structural integrity of a tank requires immediate attention and a significant repair effort. Submit work request for emergent repairs. Additional inspections and data may be required by others. Include data from the additional inspection in the Additional Comments block or attach copy of inspection results to the report for this inspection.

80. Frames - Enter frames member size and linear feet.
81. Longitudinals - Enter frames member size and linear feet.
82. Webs - Enter webs member size and linear feet
83. T-Bars - Enter T-Bars member size and linear feet.
84. Total Linear Feet of Structure Requiring Repair -
Automatic entry with previous data
85. Total Square Feet of Plating Requiring Repair -
Enter total square footage of plating requiring repair

PAGE 9 OF 12

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PROCEDURE (Contd)

J. Enter the following information into the **Seachest Data** section of the Tank and Void Inspection Form:

86. Seachest Present - Enter as:
YES, NO, UNKN
87. Seachest Number - Each seachest is numbered.
The number should be entered on the Damage Control (DC) plate outside the tank access. It is also available from the Damage Control Assistant (DCA). Enter seachest number
88. Seachest Valve Number - Each seachest has a valve used to control the flow of water into or out of the tank. Enter the number of the valve associated with the seachest for the tank being inspected. The number should be entered on the DC plate outside the tank access. It is also available from the DCA. Enter the seachest valve number.
89. Valve Operating Station - Seachest valves may be operated from a remote valve operating station. Enter the location/designation of the valve operating station used to actuate the seachest valve. This data is available from the DCA. Enter the valve operating station location.

K. Enter the following information into the **Piping Data** section of the Tank and Void Inspection Form:

90. Piping - Enter as:
YES, NO, UNKN
91. All Piping CUNI - Copper/Nickel (CUNI) piping has been proven to be highly resistive to corrosion and is the material of choice for piping systems regularly exposed to corrosive liquids. Inspect all piping visually and with a magnet. CUNI piping does not rust, has no rust bleed and is non-magnetic. Enter as:
YES, NO, UNKN, N/A
92. Only Butt Weld Joints in Piping 3-1/2 inches and larger
- All joints on piping 3 1/2" in diameter and greater should be butt welded.
Enter as: **YES, NO, UNKN, N/A**
93. Only Butt Weld or Pre-Inserted Silver Braze Joints in All Piping 3 inches Diameter and Smaller - Face-fed silver brazed joints in tanks may fail and should be removed. Only pre-inserted silver brazed joints and butt welded joints are permitted. Enter as:
YES, NO, UNKN, N/A
94. CUNI Flange Above Suction Bellmouth - A flange should be located above any suction bellmouth for hydrostatic testing.
Enter as: **YES, NO, UNKN, N/A**
95. All Segmented Fittings Removed - Segmented pipe fittings have been shown to be very susceptible to failure (i.e., collapsing) and should have been removed from all piping systems. Enter as:
YES, NO, UNKN, N/A

PAGE 10 OF 12

AAAA
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PROCEDURE (Contd)

K. Enter the following information into the **Piping Data** section of the Tank and Void Inspection Form: (cont'd)

96. All Piping Stayed and Supported - All piping within a tank should be properly supported.

Enter as:

YES, NO, UNKN, N/A

97. Heating Coils Present - Some older ships used to require heavy oil for fuel.

To ensure a positive flow of these thicker, heavier grades of oil, steam heating coils were installed in the tanks to maintain constant temperature and viscosity of the oil. These heating coils were made of carbon steel and are very susceptible to corrosion. When they deteriorate, a free exchange of liquids can occur. All of these heating coils should have been removed. Enter as:

YES, NO, UNKN, N/A

98. Heating Coil Bulkhead Penetrations Cropped out and Plug Welded - The bulkhead/tank top around the old penetration should be completely cropped out and welded up with equal strength plate.

Enter as:

YES, NO, UNKN, N/A

99. Deck Drain Present - Enter as:

YES, NO, UNKN, N/A

100. Deck Drain Damaged - Enter as:

YES, NO, UNKN, N/A

101. Deck Drain Remotely Operated - Enter as:

YES, NO, UNKN, N/A

L. Enter the following information into the **Tank Closeout** section of the Tank and Void Inspection Form:

102. All Damage Control Plugs, Blank Flanges, Temporary Hangers, Fry Pans, Staging, Debris Removed from Tank -

This block is filled out at the completion of the inspection as a final check that all extraneous equipment brought into the space for inspection and/or maintenance was removed. It is also used to verify all equipment is removed from any space entered for access to the space being inspected.

Enter as: **YES, NO, UNKN**

103. Picture Taken - Enter as:

YES, NO, UNKN

104. How Many - Enter as:

Number of pictures taken.

ADDITIONAL COMMENTS - This block is a gathering point for any specific information about conditions found during the inspection which require further information or explanation. List all JCN's written for discrepancies in this block.

PAGE 11 OF 12

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PROCEDURE (Contd)

2. Discrepancy Reporting

- A. Record all discrepancies identified on applicable SEMAT discrepancy reporting forms (OPNAV 4790/2K or Material Assessment Form). Follow the latest preservation protocol, listed in the Preservation/Protocols for COMNAVSURFLANT Tanks and Voids, in making repair recommendations. Repairs to the tank structure are to be reported separately from coating repairs.

3. Data Submittal

- A. Upon completion of tank or void assessment, the Tank & Void Inspection Form and all Discrepancy Reporting Forms recorded shall be submitted to the Assessment Team logistician for recording and update of Ship's SNAP.
- B. Upon completion of the Assessment visit, the Assessment Team Tank & Void Co-ordinator shall forward all completed Tank & Void Inspection Forms to SUPSHIP Portsmouth Code 222, CCBM Support, for update of the SEMAT Tank and Void Database.

PAGE 12 OF 12

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TANK AND VOID INSPECTION SHEET

GENERAL DATA		ADD: <input type="checkbox"/>	UPDATE: <input type="checkbox"/>	DELETE: <input type="checkbox"/>	HISTORY <input type="checkbox"/>
1. UIC:	2. Ship Class:	3. Ship's Name:			4. Hull:
5. Tank:	6. Service:				
7. SWLIN:	8. Tank Area:	9. Gallons:	10. Solid Ballast:	11. WC:	
12. Access:					
13. APL:	14. RIN:	15. Key Code:	16. Source:		
17. Date:	18. Inspection Reason:		19. Inspector's Name:		

ACCESS DATA	
20. Tank Top Corrosion:	21. Manhole cover, gasket, and fasteners:

LADDER DATA	
22. Fabricated Ladder Present:	23. Fabricated Ladder Damaged:
24. Fabricated Ladder Material:	
25. Welded Rungs Present:	26. Welded Rungs Damaged:
27. Hand/Foot Holes Present:	28. Hand/Foot Holes Damaged:

VENT/OVERFLOW DATA	
29. Vent/Overflow in Tank:	30. Check Valve Installed:
31. Vent/Overflow Line CUNI ½ way up:	

TANK LEVEL INDICATOR (TLI) DATA	
32. TLI Present in Tank:	33. TLI Damaged:
34. TLI Type:	35. Old Tank Top Penetration Present:
36. Old Tank Top Penetration Welded Closed:	37. King Gage Tubing Removed/Plug Welded:

SOUNDING TUBE DATA	
38. Sounding Tube Present in Tank:	39. Sounding Tube Damaged:
40. Deck Fitting damaged:	41. Stuck BOB's:
42. Is Material CUNI:	43. Vent Holes Present:
44. Striker Plate on Ship's Structure:	45. Striker Plate on Sounding Tube:
46. Striker Plate Damaged:	47. Take Down Joints Installed:
48. CRES Label Plate Installed:	

CATHODIC PROTECTION DATA	
49. Cathodic Protection in Tank:	50. Bottom Quantity:
51. Sides Quantity:	52. Bottom depletion Percentage:
53. Sides Depletion Percentage:	

COATING DATA	COATING APL:	COATING RIN:
54. Tank Painted:	55. Date Tank Painted:	
56. Surface Preparation Method:	57. Painting Method:	
58. Paint System 1 st Coat:		
59. Paint System 2 nd Coat:		
60. Paint System 3 rd Coat:		
61. Paint System 4 th Coat:		
62. Total Square Feet of Tank Preservation in Condition 1:		
63. Total Square Feet of Tank Preservation in Condition 2:		
64. Total Square Feet of Tank Preservation in Condition 3:		
65. Total Square Feet of Tank Preservation in Condition 4:		
66. Paint Condition Top:	67. Blistering Size Top:	68. Blistering Density Top:
69. Paint Condition Sides:	70. Blistering Size Sides:	71. Blistering Density Sides:
72. Paint Condition T-Bars:	73. Blistering Size T-Bars:	74. Blistering Density T-Bars:
75. Paint Condition Bottom:	76. Blistering Size Bottom:	77. Blistering Density Bottom:

TANK AND VOID INSPECTION SHEET

STRUCTURAL INTEGRITY DATA		
78. Structural Integrity Compromised by Corrosion:		79. Structural Integrity Requires Repair:
Structure Element	Member Size	Linear Feet
80. Frames:		
81. Longitudinals:		
82. Webs:		
83. T-Bars:		
84 Total Linear Feet of Structure Requiring Repair:		
85. Total Square Footage of Plating Requiring Repair:		

SEACHEST DATA	
86. Seachest Present:	87. Seachest Number:
88. Seachest Valve Number:	89. Valve Operating Station:

PIPING DATA	
90. Piping	91. All Piping CUNI:
92. Only Butt Weld (no silver braze) Joints in all Piping 3 ½" in Diameter and Larger:	93. Only Butt Weld or Pre-Inserted Silver Braze Joints in all Piping 3" Diameter and Smaller:
94. CUNI Flange Above Suction Bellmouth:	95. All Segmented fittings removed:
96. All Piping Stayed and Supported:	97. Heating Coils Present:
96. Heating Coil Bulkhead Penetrations Cropped out and Plug Welded:	99. Deck Drain Present:
100. Deck Drain Damaged:	101. Deck Drain Remotely Operated:

TANK CLOSEOUT	
102. All Damage Control Plugs, Blank Flanges, Temporary Hangers, Fry Pans, Staging Supports, Debris Removed from Tank:	
103. Picture Taken:	104. How Many:

ADDITIONAL COMMENTS	(Inspectors, please include JCN's and work scheduled or anticipated in comments)